

What is claimed is:

1. A contact lens station for use with a contact lens mold assembly comprising a first mold half and a second mold half for forming a contact lens therebetween, said second mold half having a molding surface facing the first mold half for cooperation therewith to mold said lens and a non-molding surface on a side of said second mold half opposite said molding surface, said non-molding surface having a central area, said contact lens station comprising:

a carrier for fixing the position of the first mold half relative to the second mold half;

an engaging member having an engaging surface for engaging the non-molding surface of the second mold half, said engaging surface configured for centralized engagement of the central area of the non-molding surface; and

a drive mechanism operatively associated with said engaging member for driving the mold halves together, said engaging member maintaining said mold halves in aligned relationship upon operation of said drive mechanism.

2. A contact lens station in accordance with claim 1, further comprising:

registration apertures associated with said carrier; and

registration pins associated with said engaging member corresponding to said registration apertures, said carrier and said engaging member being aligned precisely when said registration apertures are mated with said registration pins.

3. A contact lens station in accordance with claim 1, wherein the central area comprises above about 30% of a molding area of the second mold half, the central area centered around the geometric center of the second mold half.

4. A contact lens station in accordance with claim 1, wherein said first mold half is a front curve mold half and said second mold half is a back curve mold half.

5. A contact lens station in accordance with claim 1, further including a light path extending through said engaging surface and said second mold half, wherein said engaging member is configured to transmit radiation along said light path capable of initiating curing of the contact lens.

6. A contact lens station in accordance with claim 1, wherein said engaging member is a reciprocating piston.

7. A contact lens station in accordance with claim 6, wherein said carrier comprises at least a plurality of indentations, one of said indentations configured to hold the contact lens mold assembly;

8. A contact lens station in accordance with claim 6, wherein said carrier comprises a disc, said disc configured to engage said first mold half in a ring centered around the geometric center of said first mold half.

9. A contact lens station in accordance with claim 8, wherein the diameter of said ring is less than the diameter of said engaging surface.

10. A contact lens station in accordance with claim 1, wherein said engaging surface comprises channels.

11. A contact lens station in accordance with claim 1, wherein the center area of the non-molding surface of the second mold half is concave and said engaging surface is convex.

12. A mold part for use in a contact lens station for use with a contact lens mold assembly comprising a first mold half and a second mold half, said mold halves defining a lens forming cavity therebetween for forming a contact lens, said second mold half having a molding surface facing the first mold half for cooperation therewith to mold said contact lens, and a non-molding surface on a side of said second mold half facing away from said molding surface, said non-molding surface having a central area, said mold part comprising:

an engaging member having an engaging surface for engaging the non-molding surface of the second mold half and driving the second mold half toward the first mold half, said engaging surface configured to engage the central area of the non-molding surface.

13. A mold part in accordance with claim 12, further comprising:

a drive mechanism operatively associated with said engaging member for driving the second mold half toward the first mold half.

14. A mold part in accordance with claim 12, where the central area comprises above about 30% of a molding area of the second mold half, the central area centered around the geometric center of the second mold half.

15. A mold part in accordance with claim 12, further including a light path extending through said engaging member and the second mold half, and wherein said engaging member is configured to transmit light along said light path for pre-curing the contact lens.

16. A mold part in accordance with claim 12, wherein said engaging member is a reciprocating piston.

17. A mold part in accordance with claim 12, wherein the central area of the non-molding surface of the second mold half is concave and said engaging surface is convex.

18. A mold part in accordance with claim 17, wherein the central area of the second mold half and said engaging surface have the same radius.

19. A mold part in accordance with claim 12, further comprising:

registration pins associated with said engaging member corresponding to registration apertures associated with said first mold half, said first mold half and said engaging member being aligned precisely when said registration apertures are mated with said registration pins.

20. A mold part in accordance with claim 12, wherein said engaging surface comprises channels.

21. A contact lens station forming a plurality of contact lenses using a plurality of contact lens mold assemblies, each of the contact lens mold assemblies comprising a first mold half and a second mold half to mold one of the plurality of contact lenses therebetween, the second mold half having a molding surface facing the first mold half for cooperation therewith to mold said lens and a concave non-molding surface on a side of the second mold half opposite the molding surface, the concave non-molding surface having a central area, said contact lens station comprising:

a carrier having a plurality of indentations, each of said indentations configured to hold one of the plurality of contact lens mold assemblies; and

a support having a plurality of recesses for receiving a plurality of engaging members, each of said plurality of engaging members being resiliently mounted within a corresponding one of said plurality of recesses and having a convex engaging surface configured for centralized engagement of the central area of the concave non-molding surface of the second mold half.

22. The contact lens station of claim 21, wherein said support is movable into registration with said carrier for centering said engaging surfaces of said plurality of engaging members with the geometric centers of corresponding ones of said plurality of indentations of said carrier.

23. The contact lens station of claim 21, wherein said plurality of engaging members are resiliently mounted within said plurality of recesses with springs.

24. A method for forming a contact lens using a contact lens mold assembly comprising a first mold half and a second mold half for forming a contact lens therebetween, said second mold half having a molding surface facing the first mold half for cooperation therewith to mold said contact lens and a non-molding surface on a side of said second mold half opposite said molding surface, said non-molding surface having a central area, said method comprising the step of:

driving the second mold half toward the first mold half using an engaging member to contact the central area of the non-molding surface of the second mold half.

25. A method for forming a contact lens in accordance with claim 24, further comprising the step of:

depositing a moldable contact lens material in the contact lens mold assembly between the first mold half and the second mold half.

26. A method for forming a contact lens in accordance with claim 25, further comprising the step of:

exposing said moldable contact lens material to radiation to begin curing the contact lens.

27. A method in accordance with claim 26, wherein said step of exposing said contact lens material to radiation comprises passing light through a light path extending through said engaging member and through the second mold half to expose said contact lens material to light.

28. A contact lens prepared by a process using a contact lens mold assembly comprising a first mold half and a second mold half for forming a contact lens therebetween, said second mold half having a molding surface facing the first mold half for cooperation therewith to mold said contact lens and a non-molding surface on a side of said second mold half opposite said molding surface, said non-molding surface having a central area, said process comprising the steps of:

depositing a moldable contact lens material in the contact lens mold assembly between the first mold half and the second mold half;

driving the second mold half toward the first mold half using an engaging member to contact the central area of the non-molding surface of the second mold half; and

exposing said moldable contact lens material to radiation to initiate curing of the contact lens.